

**DRAFT**

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**  
Item 53, I. D. #5909  
**ENERGY DIVISION**  
**RESOLUTION E-4012**  
August 24, 2006

**R E S O L U T I O N**

Resolution E-4012. Pacific Gas and Electric's (PG&E) request to modify its Demand Bidding Program (DBP) is rejected. Energy Division recommends an alternative modification to the DBP for PG&E, Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E).

By Advice Letter 2870-E Filed on July 28, 2006.

---

**SUMMARY**

This Resolution rejects PG&E's proposal to modify the incentive structure of the Demand Bidding Program (DBP). Energy Division concludes that PG&E's proposal is unlikely to change the actual incentives offered to DBP participants, and therefore would not be effective in delivering more demand response.

As an alternative, PG&E, along with SCE and SDG&E, should revise the bidding window of the DBP by adding an extra hour for customers to enter their bids. Energy Division believes that modifying the bidding window enables DBP participants to enter more demand response bids.

**BACKGROUND**

PG&E's Demand Bidding Program (DBP) is a part of PG&E's three-year ('06-'08) demand response budget application which the Commission approved recently in D.06-03-024.<sup>1</sup> The program has been in existence since 2003.<sup>2</sup>

---

<sup>1</sup> The decision adopted an amended settlement which reduced PG&E's original budget proposal.

<sup>2</sup> The details of program have been revised by the Commission since 2003 but the general concept of the program has remained consistent.

**The Demand Bidding Program compensates customers if they are able to reduce electricity usage during the peak hours when requested by PG&E.**

The DBP is open to customers with a minimum demand of 200 kW. Participants receive an incentive payment for the energy they reduce each time they are notified by PG&E of a DBP event. PG&E notifies the participants one day in advance, and will trigger a DBP event if: (1) the California Independent System Operator (CAISO) issues an Alert Notice by 3 pm, or (2) when the CAISO forecasts system peak demand to exceed 43,000 MW by 3 pm.

DBP participants receive an incentive based on PG&E's forecasted day-ahead market price for energy. PG&E adds a "participation bonus" as part of the incentive depending on market price:

- 1.) When the forecasted day-ahead market price is less than or equal to \$0.25 per kW, PG&E adds a participation bonus of \$0.10 per kW for each hour of the event. Example: if the day-ahead market price is \$0.17 per kW, the DBP incentive is \$0.27 per kW.
- 2.) When the forecasted day-ahead market price is greater than \$0.25 per kW, but less than \$0.35 per kW, PG&E adjusts the participation bonus so that the total incentive paid will not exceed \$0.35 per kW. Example: if the day-ahead market price is \$0.27 per kW, the DBP incentive is \$0.35 per kW (the participation bonus is adjusted from \$0.10 per kW to \$0.08 per kW).
- 3.) When the forecasted day-ahead market price equals or exceeds \$0.35 per kW, there is no participation bonus and thus the total incentive is equal to the day-ahead market price. Example: if the day-ahead market price is \$0.37 per kW, the DBP incentive is \$0.37.

PG&E notifies DBP participants by 3 pm of a DBP event and posts the hourly incentive on its website. Participants have until 4 pm to submit an energy curtailment 'bid' of at least 50 kW for a minimum of 2 consecutive hours (between noon and 8 pm). PG&E notifies participants by 5 pm if their bid is accepted. There is no limit to the number of DBP events that can be called.

There is no penalty for participants who choose not to submit a bid. As of June 30, PG&E had 215 MWs enrolled<sup>3</sup> in the program. PG&E reports that during the month of June, the program was triggered once. The estimated amount of MWs produced by the program for that event was not available<sup>4</sup>.

**PG&E proposes changes to the DBP with intention of attracting more participation this summer.**

Via AL 2870-E, PG&E proposes a change to the existing DBP incentive payment structure. PG&E believes that the modification could attract greater amounts of participation by DBP participants for the remainder of the summer of 2006. Specifically, PG&E proposes that the \$0.10 per kW participation bonus be applied to the day-ahead market price at all times, and not reduce or eliminate the participation bonus when market prices exceed \$0.25 per kW.

---

<sup>3</sup> Enrolled (also called subscribed) MWs represent PG&E's estimate of the participants' combined MW reduction when the program is triggered.

<sup>4</sup> PG&E's Demand Response Monthly Report for the month of June 2006, filed on July 21, 2006.

Table 1 below illustrates the affect of PG&E's proposal using the same market scenarios described above:

**Table 1**

|   | Current DBP<br>Incentive Structure  | PG&E's Proposed DBP<br>Incentive Structure  | Impact of PG&E's<br>Proposal  |
|---|---|---|---|
| <b>Scenario 1</b><br>(Day-ahead market<br>price is less than or<br>equal to \$0.25 per<br>kW)                       | <b>\$0.27 per kW</b><br>(Example: A market<br>price of \$0.17 per kW<br>+ \$0.10 bonus) | <b>\$0.27 per kW</b><br>(Example: A market<br>price of \$0.17 per kW +<br>\$0.10 bonus) | <b>No effect.</b>   |
| <b>Scenario 2</b><br>(Day-ahead market<br>price is greater than<br>\$0.25 per kW but<br>less than \$0.35 per<br>kW) | <b>\$0.35 per kW</b><br>(Example: A market<br>price of \$0.27 per kW<br>+ \$0.08 bonus) | <b>\$0.37 per kW</b><br>(Example: A market<br>price of \$0.27 per kW +<br>\$0.10 bonus) | <b>Raises the<br/>incentive by as<br/>much \$0.09 or as<br/>low as \$0.01<br/>depending on the<br/>market price</b> |
| <b>Scenario 3</b><br>(Day-ahead market<br>price is equal to or<br>exceeds \$0.35 per<br>kW)                         | <b>\$0.37 per kW</b><br>(Example: A market<br>price of \$0.37 per<br>kW, no bonus)      | <b>\$0.47 per kW</b><br>(Example: A market<br>price of \$0.37 + \$0.10<br>bonus)        | <b>Raises the<br/>incentive by \$0.10.</b>  |

As demonstrated in Table 1, PG&E's proposal has no effect if market prices are less than or equal to \$0.25 per kW. If market prices are higher than \$0.25 per kW but less than \$0.35 per kW, then PG&E's proposal has a varying effect depending on the market price. If market prices move to \$0.35 per kW or higher, then PG&E's proposal has a noticeable effect.

PG&E does not specify if its proposal is applicable only for the remaining summer months of 2006 or is permanent change.

**PG&E does not request additional funding for the changes proposed.**

PG&E states that the additional costs that result from its proposed change (incentive payments) can and will be covered by PG&E's existing three-year

budget. D.06-03-024 enables PG&E to shift funds between programs<sup>5</sup> and therefore PG&E states that no additional funding is necessary.

## **NOTICE**

Notice of AL 2870-E was made by publication in the Commission's Daily Calendar. PG&E states that a copy of the Advice Letter was mailed and distributed in accordance with Section III-G of General Order 96-A and served on the service list for the demand response proceeding (A.05-06-006).

## **PROTESTS**

Advice Letter 2870-E was not protested.

## **DISCUSSION**

**PG&E's proposal is unlikely to be effective in delivering more demand response MWs this summer.**

Energy Division evaluated PG&E's proposal in the context of the recent heat wave to determine if the proposal would have made a difference at an extremely critical period of time.

In response to an Energy Division data request, PG&E provided the day-ahead DBP incentives sent to DBP participants from July 18 – 25 (generally the dates of the July heat wave)<sup>6</sup>. Because the detailed data is protected as confidential under Section 583 of the Public Utilities Code, Energy Division summarizes the information as follows: with the exception of one day, the day-ahead hourly prices for energy that were sent to DBP participants between July 18 and 25 were less than \$0.20 per kW, meaning that the DBP incentives were less than \$0.30 per kW (including the participation bonus).

---

<sup>5</sup> Section II.D.3 of the Amended Settlement adopted by D.06-03-024 enables the utilities to shift as much as 50% of funds between programs within a budget category.

<sup>6</sup> PG&E provided the information as confidential under Section 583 of the Public Utilities Code. The DBP program was not triggered on July 22 and 23 because the program does not operate on weekends.

Based on this sample of data, Energy Division concludes that if PG&E's proposal had been in place during the recent heat wave (when the program was needed the most), it would not have had an effect for five of six heat wave days the program was triggered. This is because the day-ahead hourly prices for five of six heat wave days were less than \$0.20 per kW, basically Scenario 1 in Table 1. In other words, DBP participants would have received the same incentives if PG&E's proposal had been in place for five of six heat wave days. As noted earlier in Table 1, PG&E's proposal has an effect only if market prices fall into Scenarios 2 or 3, and that happened for only one day during the six heat wave days that Energy Division sampled. Energy Division concludes that PG&E's DBP proposal is unlikely to be effective in delivering more demand response.

**The DBP program should be re-evaluated by the utilities for the purpose of improving its performance for summer 2007.**

The expedited review process for this advice letter does not permit a more thorough exploration as to why PG&E's forecasted hourly energy prices were, for the most part, quite low during the heat wave when one would expect those prices to be high. Tying the DBP program incentive to forecasted energy prices may need to be modified, or PG&E's method for forecasting those energy prices may need to be modified. More research and time is required to make those determinations. Even if time permitted Energy Division staff to design and recommend a revised incentive structure, it is unlikely the utilities could implement substantial changes to the program and expect the participants to fully understand those changes before the end of this summer.

Based upon the analysis it could complete under a compressed timeframe, Energy Division is unable to support PG&E's proposal. That being said, Energy Division believes that PG&E, the other utilities and intervenors should re-assess the incentive structure for the DBP as well as all other aspects of the program and recommend changes that could improve program performance for 2007 via the process outlined in the ruling issued on August 9, 2006 in A.05-06-006.

**Energy Division proposes that modifying the bidding window for DBP participants is a change that can be accomplished by PG&E, SCE and SDG&E quickly, and could result in additional MWs this summer.**

As described above, DBP participants have a one-hour 'window' to submit an energy bid for the next day. That window is typically between 3 and 4 pm. The

DBP participants are then notified by the utility by 5 pm if their bids are accepted.

Based on the 2005 evaluation<sup>7</sup> of the DBP program, Energy Division concludes that the one-hour window is a barrier to participation. The evaluation found that one reason why DBP participants did not bid were issues related to the bidding process, such as not enough time to respond, did not receive notification in time or the person making the decision was not available<sup>8</sup>. Increasing the bid window by an hour could address some of bid process barriers. The evaluation also reported that half of all the DBP participants (those who actively bid and those who do not) would increase their bidding if the window was expanded to 2 hours, and that three-fourths of DBP participants who are already active bidders would also increase their bid activity if an hour was added to the window.<sup>9</sup>

Energy Division therefore recommends an expansion of the bid window by at least an hour (from 2 pm to 4 pm for example) as this change would enable DBP participants the extra time to make bids and thereby increase available demand response. Such a change could be implemented by the utilities quickly, does not impose a burden upon the participants and most importantly could provide more demand response MWs this summer if they are needed. Because both SCE and SDG&E operate DBP programs, Energy Division recommends that those utilities, along with PG&E, incorporate a minimum 2 hour bidding window for their DBP programs.

---

<sup>7</sup> Evaluation of 2005 Statewide Large Nonresidential Day-Ahead and Reliability Demand Response Programs. Prepared by Quantum Consulting, Inc. April 28, 2006.

<sup>8</sup> The report found that the chief reason for non-bidding was that the participants could not reduce their load either in general or for the day requested but that 40% of participants offered reasons related to the bidding process such as limited amount of time to bid, etc. pg. 8-26.

<sup>9</sup> Evaluation of 2005 Statewide Large Nonresidential Day-Ahead and Reliability Demand Response Programs. Pg. 8-27.

## **COMMENTS**

Public Utilities Code section 311(g) and Rule 77.7 of the Commission's Rules of Practice and Procedure generally require a 30 day public review and comment period on draft resolutions. However, pursuant to section 311(g)(3) and Rule 77.7(f), this period may be reduced where "public necessity" requires reduction of the 30-day period. "Public necessity" refers to circumstances in which the public interest in the Commission adopting a resolution before expiration of 30 days clearly outweighs the public interest in having the full 30-day period for review and comment.

Here the public interest in adopting this resolution before expiration of a 30-day review and comment period is the potential avoidance of rotating outages, which can impact public health and welfare. The resolution addresses changes to a demand response program, which could lead to higher amounts of available demand response this summer. The heat wave in July 2006 resulted in unprecedented demand and strained the electrical grid. Demand response programs lower system demand during critical periods like the July heat wave and can play a role in averting rotating outages. This clearly outweighs the public interest in having a full 30-day period for review and comment. Having a full 30-day period for review and comment will delay the Commission's action on this resolution which is not in the public interest as there is the possibility of heat waves for the remaining summer months. Furthermore, the resolution addresses one pre-existing voluntary program and the changes do not negatively impact participants on that program.

Accordingly, on August 8 this matter was placed on the Commission's agenda of August 24, 2006. On August 10 it was served on the parties to the demand response proceeding (A.05-06-006) and released for public comment. Comments were due on August 17, 2006 and reply comments on August 21, 2006.

The following parties provided comments on the draft resolution on August 17: SCE, SDG&E, PG&E and DRA. No party filed reply comments.

All four parties support the draft resolution's proposal to modify the bidding window from one hour to two hours, and two of the utilities already provide their DBP participants more than one hour to submit bids. SDG&E points out that one existing DBP triggering condition (CAISO alert by 3 pm) will need to be modified to 2pm in order to accommodate the two hour bidding window.



Energy Division agrees with SDG&E that this change would better align the triggering condition to the 2 hour bidding window.

PG&E and DRA submitted additional comments with respect to the draft resolution's rejection of PG&E's proposal to modify the incentive structure. PG&E states that its proposal will make the DBP easier for customers to understand and more cleanly aligns PG&E's need for demand response when market prices climb and should therefore be approved. DRA recommends that the participation bonus be increased by an unspecified amount when the day-ahead market prices are less than or equal to \$0.25 per kW (Scenario 1 in Table 1). DRA believes this change will encourage more participation by DBP participants and is a cost-effective way to achieve more demand response this summer.

Energy Division agrees with PG&E that its proposal probably makes the program easier for customers to understand, but that does not change the conclusion reached in the draft resolution: the proposed change has little effect upon the incentives offered to DBP participants and is thus unlikely to achieve additional demand response as intended. As such, Energy Division is not persuaded to revise the draft resolution.

DRA's recommendation to increase the participation bonus for market prices in Scenario 1 may have been a viable alternative if it provided more specificity and analysis to supplement its recommendation. DRA does not recommend a specific amount, and no party provides further input on this issue. Energy Division is unable to support DRA's recommendation as it does not have any record or analysis as to what the increase should be to attract more participation. As stated in the draft resolution, the DBP should be assessed for further improvement for 2007 as outlined in the August 9 ACR.

## **FINDINGS**

1. The Demand Bidding Program (DBP) compensates customers if they are able to reduce electricity usage during the peak hours when requested by PG&E.
2. PG&E's proposal to modify the DBP incentive is unlikely to be effective in delivering more demand response MWs this summer because the proposed change does not materially affect the DBP incentive amount as demonstrated by the heat wave sample data provided by PG&E.

3. The DBP program should be re-evaluated by the utilities for the purpose of improving its performance for summer 2007.
4. Modifying the bidding window by adding an extra hour for DBP participants is a change that can be accomplished by PG&E, SCE and SDG&E quickly, and could result in additional demand response MWs this summer. This change is in effect for the remainder of 2006.
5. Demand response programs lower system demand during critical periods like the July heat wave and can play a role in averting rotating outages. The public interest in adopting this resolution at the Commission's August 24<sup>th</sup> meeting, in order to improve this demand response program for the remainder of this summer, clearly outweighs the public interest in having a full 30-day period for review and comment.

**THEREFORE IT IS ORDERED THAT:**

1. The request of Pacific Gas & Electric to modify its Demand Bidding Program as requested in Advice Letter 2780-E is denied.
2. Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric shall add at least one hour to the bidding window of the Demand Bidding Program and shall modify the existing CAISO triggering condition from 3 pm to 2 pm.
3. Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric shall file advice letters with their DBP tariff changes in compliance with this resolution within 3 days of the effective date of this resolution. The filed tariffs shall be effective as of the date of filing contingent upon Energy Division's determination that the tariffs comply with this resolution.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on August 24; the following Commissioners voting favorably thereon:

---

STEVE LARSON  
Executive Director